ENVIRONMENTAL ASSESSMENT

Construction and Operation of a DOD HUMINT Training Center,
Fort Huachuca, AZ

Prepared by:

Directorate of
Installation Support
U.S. Army Garrison
Fort Huachuca

November 2002

HOW THIS ENVIRONMENTAL ASSESSMENT IS ORGANIZED

SECTION 1 PURPOSE AND NEED discusses the purpose and need for the Proposed Action, the regulatory background surrounding this project, and the scope of this Environmental Assessment.

SECTION 2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES discusses the proposed action and alternatives addressed in this Environmental Assessment.

SECTION 3 AFFECTED ENVIRONMENT AND CONSEQUENCES describes the existing environment within the Region of Influence and provides a comparison of environmental consequences associated with the different alternatives.

SECTION 4 REFERENCES provides bibliographical information for sources cited in the text of this Environmental Assessment.

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ENVIRONMENTAL ASSESSMENT

CONSTRUCTION AND OPERATION OF A DOD HUMINT TRAINING CENTER, FORT HUACHUCA, AZ

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NOVEMBER 2002

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ENVIRONMENTAL ASSESSMENT

CONSTRUCTION AND OPERATION OF A DOD HUMINT TRAINING CENTER, FORT HUACHUCA, AZ

LEAD AGENCY: Department of the Army

TITLE OF THE PROPOSED ACTION: Expansion of DoD HUMINT Training Program at Fort Huachuca, Arizona

AFFECTED JURISDICTION: Cochise County, Arizona

PREPARED BY: Directorate of Installation Support, U.S. Army Garrison, Fort Huachuca

REVIEWED BY: Director, Installation Support, U.S. Army Garrison, Fort Huachuca

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APPROVED BY: Commander, U.S. Army Garrison, Fort Huachuca

ABSTRACT: The Department of Defense (DoD) is looking to expand the existing Human Resources Intelligence (HUMINT) training program at Fort Huachuca, Arizona to meet a critical need to train an ever-increasing number of intelligence professionals assigned to tasks in direct support of the war on terrorism. It was determined that the existing floor space at Fort Huachuca was insufficient for increased training activities.

DoD is looking to increase the number of HUMINT training program instructors and support personnel stationed at Fort Huachuca, increase annual HUMINT training program student throughput, and acquire up to 65,000 square feet of floor space to support the program.

This Environmental Assessment analyzes the Proposed Action (Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post) and two alternatives. The proposed action includes the occupation and improvement of existing Fort Huachuca facilities and construction of new facilities in a fenced area on the east side of State Route 90 designated as the Eastern Academic Complex (EAC). Under the proposed action, it is DoD's intention to construct new modular permanent buildings at the site. The existing building number 15544 at the site would undergo renovation. The total amount of new/renovated floor space is anticipated to be up to 65,000 square feet.

Under Alternative One, DoD would redevelop the EAC as described under the proposed action but retain the use of Mashbir Hall on the main post for the HUMINT training program. Mashbir Hall could be remodeled on the interior as a result of this alternative.

Alternative Two is the No-Action Alternative and consists of not approving any of the activities described herein. Several additional alternatives were determined not feasible to meet mission requirements and were therefore not evaluated in the document.

REVIEW COMMENT DEADLINE: Public comments must be received within 30 days from the publishing date of the notice of availability for this document. For further information or to submit comments on this EA, please provide comments along with your name, address, and the title of this document in writing to USAIC&FH; ATTN: ATZS-ISB (HUMINT EA); Fort Huachuca, Arizona 85650 or by fax to (520) 533-3043.

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1 PURPOSE AND NEED

1.0 INTRODUCTION

This Environmental Assessment (EA) was prepared to analyze the potential for significant environmental impact associated with the proposed construction and operation of the Department of Defense (DoD) Human Resources Intelligence (HUMINT) training program at Fort Huachuca, Arizona.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The DoD is looking to expand the existing HUMINT training program at Fort Huachuca, Arizona to meet a critical need to train an ever-increasing number of intelligence professionals assigned to tasks in direct support of the war on terrorism.

To accomplish this mandated program expansion, DoD needs to increase its training capabilities and infrastructure at Fort Huachuca. DoD currently conducts classified DoD HUMINT training in two buildings on Fort Huachuca which contain approximately 15,000 square feet of floor space. DoD anticipates that up to approximately 65,000 square feet of floor space is required for the proposed increase in HUMINT training capabilities. Therefore the existing floor space at Fort Huachuca is insufficient for increased levels of HUMINT training activities.

1.2 PUBLIC INVOLVEMENT

In keeping with established policy regarding an open decision-making process, this EA and resulting decision document of either a Finding of No Significant Impact (FNSI) or a Notice of Intent (NOI) to complete an Environmental Impact Statement (EIS) will be made available to agencies and the general public for review and comment. A Notification of Availability (NOA) will be published in applicable local newspapers and copies of the EA made available to the general public at local libraries or by request.

For further information or to submit comments on the proposed action, please send your name, address, and the title of this document in writing to USAIC&FH; ATTN: ATZS-ISB (HUMINT EA); Fort Huachuca, Arizona 85650 or by fax to (520) 533-3043.

1.3 FRAMEWORK FOR ANALYSIS

This EA is prepared in accordance with the following regulations and directives:

- National Environmental Policy Act (NEPA) (42 USC 4321 et seq.)
- Council for Environmental Quality (CEQ) Regulations (40 CFR 1500-1508)
- U.S. Army Regulation 200-2, Environmental Effects of Army Actions (32 CFR 651)

This EA is intended to be a concise public document that provides sufficient evidence and analysis for determining whether to prepare an EIS or a FNSI. NEPA requires that agencies of the federal government implement an environmental impact analysis program in order to evaluate "…major federal actions significantly affecting the quality of the human environment."

A federal action may include projects financed, assisted, conducted, regulated, or approved by a federal agency that have the potential to significantly affect the human environment. This EA was also prepared in order to meet the requirements of an effective and coordinated environmental planning process.

The following documents include extensive references to historical studies and existing conditions at Fort Huachuca and surrounding regions. These documents are incorporated by reference into this EA are available for review , with prior notice, at the Environmental and Natural Resources Division, Fort Huachuca, Arizona 85650. Call (520) 533 3120 to arrange a time for review.

- U.S. Fish and Wildlife Service (USFWS) 2002. *Biological Opinion AESO/SE 2-21-02-F-229 Fort Huachuca Ongoing and Programmed Future Military Operations and Activities*. Phoenix, Arizona: U.S. Fish and Wildlife Service. August.
- U.S. Army Garrison (USAG) Fort Huachuca. 2002a. *Programmatic Biological Assessment for Ongoing and Programmed Future Military Operations and Activities at Fort Huachuca, Arizona*. Fort Huachuca, Arizona: Environmental and Natural Resource Division. July.
- USAG Fort Huachuca. 2002b. *Programmatic Environmental Assessment for Implementation of Integrated Cultural Resources Management Plan at Fort Huachuca, Arizona.* Fort Huachuca, Arizona: Environmental and Natural Resource Division. July.
- USAG Fort Huachuca. 2000a. *Environmental Assessment for Comprehensive Unmanned Aerial Vehicle Testing and Training at Fort Huachuca, Arizona*. Fort Huachuca, Arizona: Environmental and Natural Resource Division. June.
- USAG Fort Huachuca. 2000b. *Environmental Assessment for Artificial Aquifer Recharge and Treated Effluent Reuse at Fort Huachuca, Arizona*. Fort Huachuca, Arizona: Environmental and Natural Resource Division. July.
- USAG Fort Huachuca. 1999. *Final Environmental Impact Statement: Approval of Land Use and Real Estate Investment Strategies in Support of Real Property Master Planning, Fort Huachuca, Arizona*. Fort Huachuca, Arizona: Environmental and Natural Resource Division. November.
- USAG Fort Huachuca. 1998. *Demolition Plan Environmental Assessment*. Fort Huachuca, Arizona: Environmental and Natural Resource Division. March.

2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.0 INTRODUCTION

This section provides a description of the proposed action and alternatives considered in order to identify potentially affected environments and potential impacts to these environments.

DoD is looking to increase the number of HUMINT training program instructors and support personnel stationed at Fort Huachuca, increase annual HUMINT training program student throughput, and acquire up to 65,000 total square feet of floor space to support the program.

DoD anticipates the employment of up to 60 intelligence professionals, of which approximately 15 are expected to be uniformed military members. Of those 15 military members, it is anticipated that approximately 10 would require housing on Fort Huachuca. Of the 60 intelligence professionals, 24 personnel are already working with the HUMINT program at Fort Huachuca; 21 personnel are expected to be recruited from the Fort Huachuca / Sierra Vista Area; 15 personnel are expected to relocate to Sierra Vista from other areas.

DoD anticipates enrolling 50 students at Fort Huachuca at any given time for a full-time equivalent (FTE) of 50 students per year. This anticipated increase is approximately 32 FTE students per year above current levels of HUMINT training at Fort Huachuca. Students would be stationed on Fort Huachuca under temporary duty (TDY) status traveling from their home station, and housed on-post if space is available. If on-post billeting is not available, students would be housed off-post in local hotel accommodations.

While in attendance, students will be variously engaged in classroom instruction and field training activities in and around commercial facilities within a 50-mile radius of Fort Huachuca. Post roads and public streets and highways will be used to move students in and around the operating area. For purposes of analysis, an additional ten (10) mid-sized sedan automobiles could operate daily during training activities.

DoD anticipates that up to 65,000 square feet of floor space is required for the proposed increase in HUMINT training capabilities.

As a part of DoD's ongoing Environmental Stewardship Program, the proposed action includes the funding of local water conservation and water use reduction projects in the amount of $40,000 to offset anticipated increased water demand associated with the proposed action.

2.1 PROPOSED ACTION – REDEVELOPMENT OF THE EASTERN ACADEMIC COMPLEX WITH DISCONTINUED USE OF BUILDINGS ON MAIN POST

The proposed action includes the occupation and improvement of existing Fort Huachuca facilities and construction of new facilities in a fenced area on the east side of State Route 90 designated as the Eastern Academic Complex (EAC). Under the proposed action, it is DoD's intention to construct new modular permanent buildings at the site (Figure 2.1). The existing 15,000 square foot building 15544 would undergo renovation. The total amount of new and renovated floor space is anticipated to be up to 65,000 square feet.

Potential impacts associated with site preparation activities at the complex are minimal, as the demolition of pre-existing structures was previously evaluated in 1998 NEPA documentation (USAG Fort Huachuca 1998). These activities on the site included the removal of four primary structures, excavation of the existing paved parking areas, removal of above ground utilities and perimeter fencing, and grading of the site to a construction-ready condition. The scope of this proposed action begins with facility construction/renovation.

Of the approximately 25-acre site, it is anticipated that only 10 acres would be used during facility construction. The areas for the placement of the modular buildings are previously disturbed and do not include areas of native vegetation (see Figure 2.2). Construction activities could include additional excavation, grading, paving or landscaping during phased construction intervals between 2003 through 2007.

For purposes of analysis, heavy construction equipment could operate for up to four weeks per annum during this five-year period. All existing water supply lines at the site would be checked for leaks and replaced/repaired as necessary. Potable water may be supplied to the site from Fort Huachuca or a local commercial provider. The existing septic systems have been evaluated and are inadequate. New piping underneath State Route 90 or elsewhere will be necessary to provide connection between the site and the Fort Huachuca Wastewater Treatment System unless the proponent decides to connect to the Sierra Vista Waste Water Treatment System. Buried utility at the site may be relocated as necessary at the site to accommodate facility design and security considerations.

Government construction personnel from the U.S. Army Corps of Engineers (USACE) and U.S. military as well as civilian construction personnel from Sierra Vista or surrounding region could be used during construction. Construction materials could be supplied by local or regional vendors. Operations at Fort Huachuca would not be affected by construction activities.

The new/modified facility is not anticipated to store or generate hazardous materials or wastes other than standard cleaning agents and would not introduce any new electromagnetic fields in the area. For purposes of analysis however, future use and storage or small amounts of hazardous materials (i.e. lithium batteries, etc.) at the site may occur.

Under this alternative, DoD would return two buildings currently in use on the main post to Fort Huachuca real property management once the new facilities are permanently occupied. This is the Preferred Alternative.

2.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Under Alternative One, DoD would redevelop the EAC as described under the proposed action but retain the use of Mashbir Hall on the main post for the HUMINT training program probably after interior remodeling to meet training requirements.

Disturbance and construction activity at the EAC would be identical to that listed under the proposed action. Students and instructors would be shuttled between Mashbir Hall and the EAC daily.

The other building currently in use for HUMINT training would be returned to Fort Huachuca real property management inventories once the new/remodeled facilities are permanently occupied.

2.3 ALTERNATIVE TWO – NO ACTION

Under Alternative Two, the DoD would continue to utilize the two current buildings for the HUMINT training program. No new facilities would be constructed as currently proposed in this assessment. No increase in HUMINT training activities at Fort Huachuca would occur as currently proposed. Although the No-Action Alternative would fail to provide the required facilities and operational capacity for the DoD HUMINT training program at Fort Huachuca, if implemented, it would not result in any reduction or restriction of other ongoing HUMINT program activities independent of those proposed in this assessment.

2.4 ALTERNATIVES EVALUATED BUT DISMISSED FROM FURTHER CONSIDERATION EARLY IN THE SITE SELECTION PROCESS

Five additional alternatives were evaluated during the preliminary site selection process but dismissed for failing to provide reasonable options for project implementation:

- The renovation of building 90201 (Old Quartermaster's Laundry Facility) on Fort Huachuca was evaluated but dismissed because another government agency recently took possession of the facility.
- The renovation of building 66050 (Old Mountain View Officer's Club) on Fort Huachuca was dismissed because of the presence of lead-based paint, concern with structural integrity, and possible facility demolition.
- The expansion of two currently-used buildings on Fort Huachuca was evaluated but dismissed because existing site layouts and infrastructures were not capable of providing the 65,000 square feet of floor space required for proposed HUMINT program operation. Therefore this alternative did not meet the mission requirements of the DoD.
- The leasing of vacant facilities at Davis Monthan Air Force Base in Tucson, Arizona was evaluated but dismissed because another government agency recently took possession of the suitable vacant facilities.
- The leasing of certain vacant facilities in Sierra Vista, Arizona was discussed but dismissed because of inadequate communications infrastructure and other security considerations.

2.5 ALTERNATIVES MATRIX AND PRELIMINARY IMPACT SCOPING

Three alternatives including the No-Action Alternative (Alternative Two) will be carried forward for analysis. Table 2.1 presents each of the alternatives in comparison to the stated purpose and need of the proposed action. Table 2.2 presents the results of the preliminary impact scoping process.

Table 2.1 Alternatives Matrix

	Compliance with Alternatives		
Requirements	**Proposed Action: Redevelopment of the Eastern Academic Complex with Discontinued Use of Main Post Buildings**	**Alternative One: Redevelopment of the Eastern Academic Complex with Continued Use of Building 62715**	**Alternative Two: No Action**
Ability to provide up to 65,000 square feet of floor space	Yes	Yes	No
Ability to support proposed increases in HUMINT training program activities	Yes	Reduced [1]	No
Ability to provide efficient training operations	Yes	Reduced [1]	No

[1] The transportation of students and/or instructors between building 62715 and the EAC would reduce daily training capabilities and impose additional transportation and logistical constraints.

Table 2.2 Results of Preliminary Impact Scoping Process

	Potential for the action alternatives to impact the human environment
Land Use	The proposed action and alternative one occur on U.S. Army property with similar institutional uses in the past and are consistent with the Fort Huachuca Real Property Master Plan (USAG Fort Huachuca 1995). Land to the east of the site is publicly-owned and zoned for industrial use, therefore the proposed action and alternatives are not in conflict with the city of Sierra Vista's VISTA 2020 Plan (City of Sierra Vista 2002). Arizona SB1525 Preservation of Military Airports does not apply to this type of action. No significant impact to local or regional land use is anticipated. No further evaluation is warranted.
Visual Resources	The redevelopment of the complex would be consistent with the previous visual landscape at the site as well as the current landscape within the region. No long-term change to the character of the area would occur as a result of the proposed action. No bright, uncomfortable, or visually disturbing lighting would be introduced that could be seen from nearby public or residential areas or roadways. No significant impact to local or regional visual resources is anticipated. No further evaluation is warranted.
Topography, soils and geology	Direct impacts may result from construction activity at the EAC. The extent of these impacts must be identified. Further evaluation is warranted.
Hydrology and Water Resources	No significant impacts are anticipated but due to the complexity of water resource issues in the region, the extent of water use must be identified. Further evaluation is warranted.
Biological Resources	Direct impacts may result to non-native vegetation found within the EAC along with possible indirect impacts to wildlife in the area. The extent of these impacts must be identified. Further evaluation is warranted.
Floodplains	No flood plains are found within the EAC. No significant impact to floodplains is anticipated and no further evaluation is warranted.
Air Quality	Direct impacts from increased instructor and student Personally Owned Vehicle (POV) travel, training-related travel, and emissions from construction activities at the EAC. The extent of these impacts must be identified. Further evaluation is warranted.
Noise	HUMINT training is primarily classroom-oriented; therefore activities at the EAC are not anticipated to result in increased noise levels off-site or on adjacent lands. Noise associated with facility construction is considered a point source, with attenuation at a rate of 6 dB per doubling of distance. Based on 7 hours of continuous construction activity per day, the distance to the 65 Ldn noise contour (commonly used for planning purposes to identify potential impacts to sensitive receptors) is approximately 450 feet. Because of the absence of any noise-sensitive human receptors within 1000 feet of the site, noise generated during construction activities is anticipated to be temporary and less than significant. No further evaluation is warranted.
Historic and Cultural Resources	The EAC site where development is planned is entirely disturbed. Fort Huachuca records indicate no presence of historic or cultural resources at the site. If, during the construction of the facilities, cultural materials are unearthed, work will stop at the area of the find, and the post archeologist will be called to the site. The archeologist will determine how to proceed under federal regulation. No significant impact to historic or cultural resources is anticipated and no further evaluation is warranted.
Infrastructure	Indirect impacts would result from increased utility demands. Potential disruption of existing utility services could result during construction. The extent of this impact needs to be identified. Further evaluation is warranted.

Table 2.2 Results of Preliminary Impact Scoping Process (cont.)

	Potential for the action alternatives to impact the human environment
Hazardous Materials	The use or storage or hazardous materials other than standard cleaners and solvents or generation of hazardous wastes at the EAC are not anticipated, however, because the facility may eventually store or use small quantities of hazardous materials (i.e. lithium batteries or other similar products), further evaluation is warranted.
Socioeconomics	Indirect impacts would result from an increase in personnel in the region. The extent of this impact needs to be identified. Further evaluation is warranted.
Environmental Justice and Protection of Children	The EAC is not adjacent to any residential populations and will not disproportionately affect low income or minority populations. No schools are located adjacent to the EAC and the proposed action and alternatives have no potential to affect the health and safety of children. No further evaluation is warranted.
Health and Human Safety	The construction and operation of the HUMINT program at the EAC would not constitute a health or human safety concern for local or regional populations. No impact on health and human safety is anticipated. No further evaluation is warranted.
Transboundary Impacts	The southern boundary of Fort Huachuca is located approximately 8 miles north of the U.S.-Mexico international boundary. The proposed action and alternatives are not anticipated to have any transboundary impacts. No further evaluation is warranted.
Cumulative Impact	Loss of non-native vegetation, increase in DoD personnel and operations in the region, and increases utility consumption may result from the proposed action and alternatives. Further evaluation is warranted.

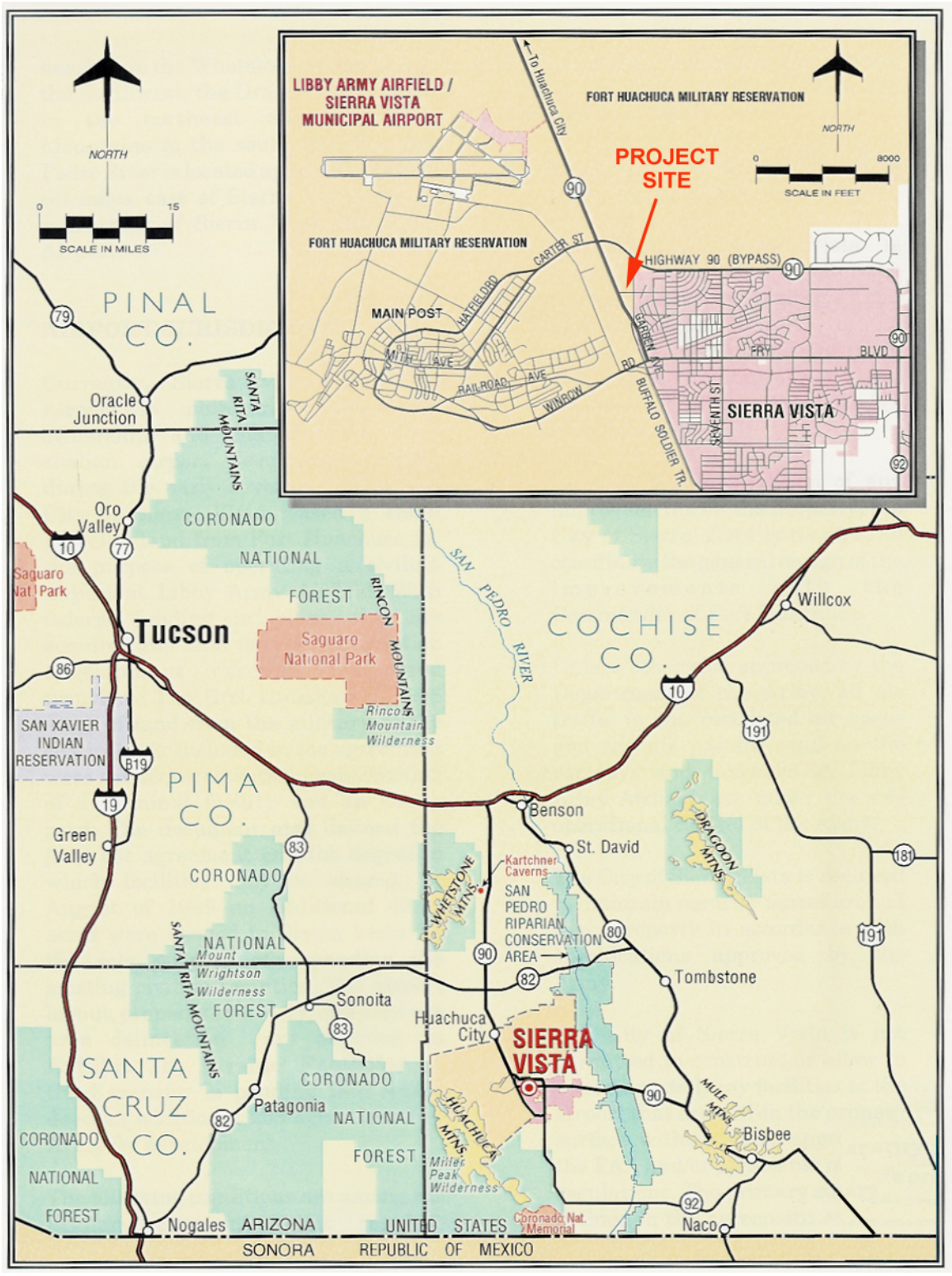

Figure 2.1 Location Map

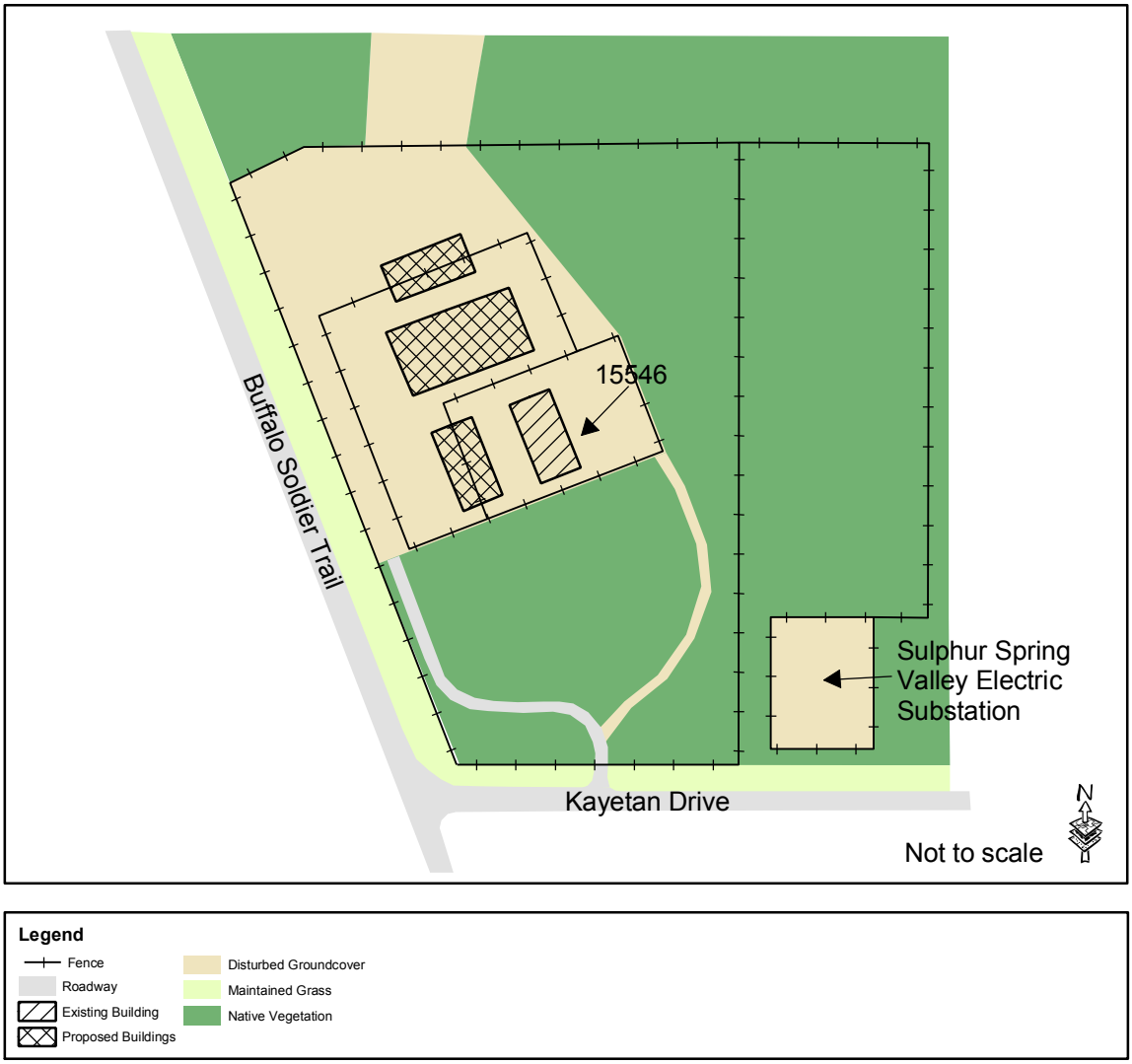

Figure 2.2 Proposed Eastern Academic Complex Layout

3 AFFECTED ENVIRONMENTS AND CONSEQUENCES

3.0 INTRODUCTION

This section describes conditions of, and possible impacts to, environmental resources potentially affected by the proposed action and alternatives. The descriptions of existing conditions provide a baseline understanding of the resources from which any environmental changes that may be brought about by the implementation of an alternative can be identified and evaluated. Following the existing conditions, potential changes or impacts to the resources are described as environmental consequences. As stated in CEQ Guidelines, 40 CFR 1508.14, the human environment potentially affected is interpreted comprehensively to include the natural and physical resources and the relationship of people with those resources. The term "environment" as used in this report encompasses all aspects of the physical, biological, social, and cultural surroundings. In compliance with guidelines contained in NEPA and CEQ regulations, the description of the affected environment focuses only on those aspects potentially subject to impacts (see Table 2.2).

Cumulative impacts defined in the CEQ regulations (40 CFR 1500-1508) as those impacts attributable to the proposed action combined with other past, present, or reasonably foreseeable future impacts regardless of the source are also evaluated (Section 3.11).

3.1 TOPOGRAPHY, SOILS, AND GEOLOGY

3.1.1 CRITERIA FOR SIGNIFICANCE

Topographic impacts relate to the potential for large-scale or noticeable alteration of local topographic conditions. Soil impacts relate to the level of anticipated soil redistribution. These impacts relate to the amount and type of disturbance that can be attributed to the proposed action or alternatives. A determination of significant impact on soil resources could result if:

- Erosion is increased resulting in an appreciable loss of topsoil that cannot be mitigated, or.
- Increased sedimentation caused by grading or impervious surfacing impedes the function of drainage facilities and watercourses.

In addition, a significant impact could also result if construction activities or operations have a high potential for soil contamination. This consideration is discussed in Section 3.7 *Hazardous Waste, Substances and Materials*, and not repeated here.

Geologic impacts can be direct (addressed in this section) or indirect related to groundwater (covered in Section 3.2 *Hydrology and Water Resources*). A determination of significant impact on geologic resources could result if:

- Project activities cause the movement of earth related to existing geologic hazards such as sinkholes, caves, mines, or quarries, or
- Project activities cause seismic activity along existing fault lines

The Region of Influence (ROI) for these resources is defined by the area within which an action may indirectly or directly cause changes in the character of the resource. This includes direct changes due to proposed earth disturbing activities as well as potential down-stream activities that may result from increased "up-stream" erosion, sedimentation or change in topographic condition. Current baseline information regarding local and regional topography, geology, and soils can be found in USAG Fort Huachuca 2002a and is hereby incorporated by reference. Site-specific detail and relevant data not previously documented are provided.

3.1.2 BASELINE ENVIRONMENT

The EAC is situated at approximately 4,600 feet above mean sea level (MSL), and areas within the complex are relatively flat and northward sloping. Soils in the area consist of alluvium that was deposited during the Pleistocene period. This soil consists of a brown sandy loam derived from granitic, limestone, and volcanic rock. This type of soil is known to be prone to erosion and gully formation with the removal of its protective vegetative cover. These sandy and gravelly loams are deep, corrosive soils characterized by rapid runoff and moderate to severe erosion. There is no prime farmland found at the complex or on adjacent lands.

3.1.3 POTENTIAL CONSEQUENCES

3.1.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

No significant alternation of topographic features would result from the proposed action. Minor grading and filling may occur. Most of the grading would take place to prepare the site for construction. Ground disturbance is anticipated to be less than 10 acres in total and would occur in previously disturbed areas. No significant impact to local or regional topography is anticipated.

The proposed action contains no activity that would cause a significant disturbance to existing geologic features or conditions. No significant impact to local or regional geologic conditions is anticipated.

Some excavation and ground clearing would occur as a result of facility construction. Surface disturbance from excavation and construction will be limited to the extent possible. While most soils within the ROI are classified with moderate or severe erodibility, soil disturbing activities are only anticipated for locations outside of riparian, estuarine, and environmentally sensitive and special management zone areas. The excavated soils will be temporarily kept nearby at predetermined stockpile locations and eventually redistributed to other areas as needed. During excavation, soils have the potential to be carried by strong winds or washed away by heavy rains, which would constitute an impact, if not managed using Best Management Practices (BMPs) during construction. The stockpiled dirt from construction has the same potential for erosion.

For disturbances of one acre or more, a Storm Water Pollution Prevention Plan (SWPPP) is generally required prior to project implementation. The purpose of the plan is to minimize erosion through the use of BMPs. These BMPs will ensure that construction-related soil erosion is kept to a minimum. BMPs would be specifically designed to control the amount and velocity of runoff and its ability to carry sediment (soil) by diverting incoming flows. BMPs also include

sediment traps to retain sediment on the project site. Due to the limited amount of excavation that would be required to prepare the site for facility construction, no appreciable loss of topsoil is anticipated. Increased sedimentation caused by grading and impervious surfacing is not anticipated to impede the function of any drainage facility or watercourse. No significant impact to soil resources from increased erosion or downstream soil redistribution is anticipated.

3.1.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are identical to those described for the Proposed Action. No significant impact on topographic, geologic or soil resources is anticipated.

3.1.3.3 Alternative Two – The No Action Alternative

No change in topographic, geologic, or soil resources of the ROI would occur. No impact on or soil resources is anticipated.

3.2 HYDROLOGY AND WATER RESOURCES

3.2.1 CRITERIA FOR SIGNIFICANCE

Potential for significant impacts in this resource area could include direct changes due to proposed water consumption or discharge as well as potential surface or subsurface activities that could affect local or regional water quality or availability.

Potential impacts to hydrology and water resources (surface water and groundwater) could be direct, indirect, short-term, or long-term. A determination of significant impact on hydrology or water resources could result if any of the following conditions are anticipated to occur:

- An increase in soil settlement or ground swelling that damages structures, utilities, or other facilities caused by inundation and/or changes in the groundwater level.
- Storm water and/or runoff constituents significantly degrade downstream surface water quality.
- Grading or other construction activities discontinue the function of drainage facilities or watercourses.
- A usable groundwater aquifer for municipal, private, or agricultural purposes is adversely affected by depletion or contamination

3.2.2 BASELINE ENVIRONMENT

Current baseline information regarding local and regional hydrology and water resources can be found in USAG Fort Huachuca 2002a and is hereby incorporated by reference. Site-specific detail and relevant data not previously documented are provided.

No floodplains, wetlands or other surface water resources are within or adjacent to the 25-acre site or at the building currently in use.

3.2.3 POTENTIAL CONSEQUENCES

3.2.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

The proposed action is not anticipated to induce runoff or concentrated flows causing erosion that affects slope stability or endangers facilities or wildlife habitat from oversaturation of the soil or undercutting of slopes. The proposed action is not anticipated to cause an increase in soil settlement or ground swelling that would damage structures, utilities or other facilities.

Storm water runoff associated with the site is currently directed to the northeast portion of the parcel where it ultimately drains into the Babocomari River. Impervious surfaces such as rooftops, paved parking lots and roadways, affect the hydrology (runoff quantity) and water quality of a given drainage basin. Surface water runoff from paved surfaces is classified as nonpoint source pollution, meaning that the runoff flows in "sheets." The proposed action is anticipated to create only a minor increase in additional nonpoint source pollution in the area. No significant impact to water quality on site or downstream is anticipated.

Total consumptive water use associated with the proposed action is estimated at approximately 13.58 acre/feet per year (Appendix A). Estimated annual consumptive water use would be entirely offset through water conservation projects, in the amount of $40,000, implemented as a part of the proposed action and in accordance with *USAIC&FH Policy 119, Fort Huachuca Water Use Mitigation Policy* (USAIC&FH 2002). Therefore, the proposed action is not anticipated to increase annual water consumption at Fort Huachuca or in the region and would not result in any usable groundwater aquifer for municipal, private, or agricultural purposes (including the Sierra Vista Subwatershed) being adversely affected by depletion or contamination. As a result, no significant impact to groundwater resources is anticipated as a result of the proposed action.

No release of hazardous substances or pollutants into surface water or groundwater is anticipated from the proposed action. No injection of substances into the groundwater is anticipated. No impact on the quality of groundwater is anticipated as a result of the proposed action and therefore no impact to surface or groundwater quality is anticipated.

3.2.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are identical to those described for Alternative One. Water use for existing activities at building 62715 have already been mitigated through the Fort Huachuca water conservation program. No significant impact on hydrology or water resources is anticipated.

3.2.3.3 Alternative Two – The No Action Alternative

No change in existing hydrology or water resource conditions would occur. No impact on hydrology or water resources is anticipated.

3.3 BIOLOGICAL RESOURCES

3.3.1 CRITERIA FOR SIGNIFICANCE

Impacts on biological resources could occur from facility construction and operation. A determination of significant impact on biological resources (to include vegetation, wildlife and protected species) could result if any of the following conditions are anticipated to occur:

- Jeopardy to populations of a federal status species.
- Adverse modification of federally-designated critical habitat.
- Loss of a critical, yet limited, resource of significant importance to a federal status threatened, endangered, or candidate species.
- Substantial disturbance of generally pristine or sensitive vegetation resources in the project area from vehicular or human activity.
- Substantial interference with, or complete disruption, of a heavy-use wildlife movement corridor.

The ROI for biological resources includes the EAC and the adjacent region

3.3.2 BASELINE ENVIRONMENT

Biological resources are discussed in terms of vegetation, habitat types, and wildlife species that have been observed or that have the potential to occur within the area. In addition, species protected by the Endangered Species Act of 1973, as amended (16 USC § 1531) are addressed. Current baseline information regarding biological resources at Fort Huachuca and in the region can be found in USAG Fort Huachuca 2002a and is hereby incorporated by reference. Site-specific detail and relevant data not previously documented are provided.

3.3.2.1 Vegetation

The EAC is located within a high desert plain. Vegetation within the developed and previously disturbed portions of the complex is dominated by non-native grasses and invasive weeds (see Figure 2.2). The vegetation surrounding the developed areas and to the north and east of the EAC is typical of mesquite-grass savanna habitats which cover approximately 7,100 acres on Fort Huachuca (USAG Fort Huachuca 2002a).

3.3.2.2 Wildlife

Wildlife species likely to occur at the complex include reptiles such as desert spiny lizard and Texas horned lizard; mammals such as Harris' antelope squirrel, desert cottontail, and black-tailed jack rabbit; and birds such as cactus wren and curve-billed thrasher.

3.3.2.3 Threatened and Endangered Species

No state or federal status species are known to exist or are anticipated to exist at the EAC or adjacent areas (USAG Fort Huachuca 2002a).

3.3.3 POTENTIAL CONSEQUENCES

3.3.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Construction activities associated with the proposed action would be implemented within the boundary of the existing EAC developed property, which is dominated by invasive weeds and non-native grasses. A minor, temporary impact on wildlife is possible during construction activities, where noise and human activity may disturb a roaming or foraging animal. This impact will be negligible, of short duration, and will not result in a significant impact on wildlife in the ROI. The common wildlife species found at and surrounding the proposed construction site would be displaced during construction. However, considering that higher quality native habitat exists in the immediate vicinity, the impact of this habitat displacement is expected to be relatively minor and not significant.

In addition to the area of disturbance, there would be a temporary decrease in the quality of the habitat immediately adjacent to the construction sites due to increased noise levels, traffic, lights, and other human activities. Wildlife species that require isolation from such impacts may be displaced into surrounding, less disturbed areas. However, after construction has been completed, it is expected that some of the displaced species, particularly birds, would return.

The site does not support any unique wildlife habitat, heavy-use wildlife movement areas, or wildlife movement corridors, therefore construction and operation activities under the proposed action would not result in any significant impact to wildlife habitat or movement areas.

Section 7 of the Endangered Species Act, as amended, requires each Federal agency to ensure that "any action authorized, funded, or carried out by such agency…is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modifications of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exception of such action by the Committee…". Section 7 coordination further requires that a determination be made as to the action's likelihood to jeopardize the continued existence of any species proposed to be listed as a threatened or endangered species, or in the destruction or adverse modification of critical habitat proposed to be designated for such candidate species.

The proposed action is anticipated to have no effect and therefore no significant impact on any state or federal status species. The site is not located within any federally-designated critical habitat and would not cause an adverse modification to any critical habitat found in the general region. No loss of a critical, yet limited resource of significant importance to a federal status species would result.

Impacts to biological resources resulting from population growth in the Sierra Vista/Fort Huachuca area as they relate to the San Pedro River is a primary concern found in most NEPA scoping actions in the area. This issue is addressed under Section 3.11 *Cumulative Impacts*.

3.3.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts for Alternative One are identical to those described for the proposed action. Therefore Alternative One is anticipated to have no significant impact on biological resources.

3.3.3.3 Alternative Two – The No Action Alternative

No change in existing biological conditions would occur. No impact on biological resources is anticipated.

3.4 AIR QUALITY

3.4.1 CRITERIA FOR SIGNIFICANCE

Potential impacts on air quality can be divided into short-term and long-term. Short-term impacts are usually associated with construction and grading activities, and long-term impacts are typically associated with build-out conditions. Most long-term emissions would be due to increased vehicle use.

A determination of significant impact on air quality could result if any of the following conditions are anticipated to occur:

- Activities would release criteria pollutants that exceed Federal AAQS for pollutants adopted by the State of Arizona.
- Activities are not in conformity with Section 176 of the Federal Clean Air Act for federal actions.

On November 1993, the EPA published the General Conformity Final Rule in the Federal Register (58 FR 63214). The purpose of the rule, "*Determining Conformity of General Federal Actions to State or Federal Implementation Plans"* is to ensure that all Federal actions conform to the State Implementation Plan (SIP) applicable to the project site. The applicable regulations are cited in 40 CFR 6, 51 Subpart W, and 93. A "federal action" is defined as any activity engaged in by a Federal agency, department, or other entity licensed, permitted, funded, or otherwise supported by a federal entity. "Conformity to SIP" is defined as conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the National AAQS and achieving expeditious attainment of such standards. As a result of the General Conformity Rule, federal actions must be evaluated to assess whether emissions associated with the action will interfere with an area's air quality improvement plan. The general conformity rule applies only to federal actions that may emit a criteria pollutant for which an area has been designated as non-attainment or maintenance.

General ambient air quality conditions are affected by pollutants emitted at a site as well as those emitted upwind and moved by wind and air currents into the site area. The air quality in the immediate vicinity of Fort Huachuca is of primary concern in this EA. Given the fort's remote location, upwind emissions play a minimal role in the air quality of the region. Therefore, the ROI for air quality is limited to Fort Huachuca, with considerations directed toward how the activities evaluated would influence local and downwind air quality.

3.4.2 BASELINE ENVIRONMENT

Baseline information regarding air quality can be found in USAG Fort Huachuca 2002b and is hereby incorporated by reference. Fort Huachuca is located in an area meeting attainment status for all State and Federal Ambient Air Quality Standards (AAQS).

3.4.3 POTENTIAL CONSEQUENCES

3.4.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Proposed EAC facilities are primarily classroom/instructional and would not directly produce emissions subject to evaluation under the General Conformity Rule. A temporary increase in emissions would occur due to equipment operation during construction of proposed EAC facilities. Pollutants would include exhaust from heavy construction equipment and ground vehicles. Fugitive dust would also increase during construction activities, although it would be greatly reduced by dust suppression activities on-site. Dust emissions would consist primarily of large particles that generally settle on nearby surfaces, rather than becoming airborne for any great distance. Emissions would also result from the proposed increase in vehicle use associated with instructor, student, and HUMINT training program travel.

The area is within an attainment area for all criteria pollutants, and the total emission from these activities would clearly not exceed 50 ton/year pollutant-specific *de minimis* threshold values for all criteria pollutants and would be less than 10% of the total regional emissions budget for the air basin (see Appendix B for results of analysis). Further procedural requirements under the General Conformity Rule are therefore not applicable and the proposed action is anticipated to have a less than significant impact on local or regional air quality.

3.4.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are identical to those described for Alternative One with the exception of additional vehicular travel between the main post and the EAC to transport students between the two facilities. This additional bus travel would result in only a negligible addition to emission estimates provided in Appendix B. No significant impact to air quality is anticipated.

3.4.3.3 Alternative Two – The No Action Alternative

No change in existing ambient air quality would occur and no new pollution sources would be introduced. No impact to air quality is anticipated.

3.5 INFRASTRUCTURE AVAILABLE

3.5.1 CRITERIA FOR SIGNIFICANCE

Potential impacts on public services, utilities or energy could be determined significant if any of the following conditions are anticipated to occur:

- A resource exceeds its present and/or future capacity to serve.
- A long-term interruption to, or interference of, service.
- A significant increase in annual energy consumption or peak potential loading is calculated to exceed the capacity of the transmission lines and transformers.

The EAC and utility provider infrastructure comprises the ROI for these services and resources.

3.5.2 BASELINE ENVIRONMENT

Baseline information regarding infrastructure at Fort Huachuca can be found in USAG Fort Huachuca 2002b and is hereby incorporated by reference. Site-specific detail and relevant data not previously documented are provided

Potable water at the EAC is currently provided by Fort Huachuca. Wastewater from the EAC has historically been disposed through on-site septic systems, however the condition and serviceability of these systems has been evaluated and they have been determined unsuitable for use in this proposed action. Fort Huachuca operates one WWTP just across Buffalo Soldier Trail from the EAC. Additionally, the City of Sierra Vista sewer system is also near this project site and may have potential for connections and use by this project. Electrical power at the EAC is obtained from a Tucson Electric Power Company 138/46/14 kV Substation, located on Fort Huachuca. Natural Gas is supplied to the EAC by Southwest Gas.

3.5.3 POTENTIAL CONSEQUENCES

3.5.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Accidental damage to underground utility lines during construction activities may temporarily impact the provision of utilities, but those potential impacts will not be significant on the human environment. Fort Huachuca construction guidelines require existing utilities to be clearly marked and avoided (if possible) during any ground disturbing activity. There would be no significant increase in the potential for accidental damage due to construction activities associated with the proposed action.

Estimated increases in water demand associated with the proposed action would not exceed the capacity of the existing potable water system at Fort Huachuca and not cause a significant impact on fort water supply. In the event that potable water is supplied by a local commercial provider, additional piping and connection to the supply system would be required. The installation of this new infrastructure and resulting demands on local commercial water delivery services are not anticipated to affect supply capabilities. Wastewater from the EAC will be disposed through the Fort Huachuca treatment and reuse/recharge system or with of Sierra Vista systems, depending on final layout design and infrastructure considerations. Increased wastewater and water recharge associated with the proposed action is not anticipated to exceed the capacity of either the fort's or the city's wastewater treatment and reuse/recharge program.

A minor increase in generation of solid waste is anticipated as a result of the proposed action. An average of 5 tons of additional solid waste generation is anticipated annually. The waste will be disposed in landfills which are Arizona Department of Environmental Quality (ADEQ)

approved for the type of solid waste generated. No significant impact on solid waste disposal or to local landfills is anticipated as a result of the proposed action.

No other activities are anticipated to significantly impact the human environment regarding the provision of public services, utilities, or energy consumption. All utilities at Fort Huachuca are well under maximum capacity (USAG Fort Huachuca 1999) and the proposed action will not cause any utility to exceed its present and/or future capacity to serve. No significant impact to public services, utilities, or infrastructure is anticipated.

3.5.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are similar to those described for the proposed action. Additional utility usage from the continued use of building 62715 on the Main Post would occur. This additional utility usage is not anticipated to be significant, or cause any utility to exceed its present and/or future capacity to serve. No significant impact to public services, utilities, or infrastructure is anticipated.

3.5.3.3 Alternative Two – The No Action Alternative

No change in existing public services or utilities would occur. No impact on public services, utilities, or infrastructure is anticipated.

3.6 TRAFFIC AND TRANSPORTATION

3.6.1 CRITERIA FOR SIGNIFICANCE

Potential impacts to transportation focus on key roadways in the ROI, including the transportation networks in the region that serve as direct or mandatory indirect linkages to the EAC. A determination of significant impact on traffic or transportation could result if any of the following conditions are anticipated to occur:

- Traffic or construction activities result in a substantial safety hazard to motorists, pedestrians, or bicyclists (military or civilian).
- Construction activities would result in the long-term or permanent restriction of one or more lanes of a primary or secondary arterial or intersection during peak-hour traffic, thereby cutting its capacity and creating significant congestion.

The ROI for ground transportation includes the roads used to access the EAC and surrounding areas

3.6.2 BASELINE ENVIRONMENT

Baseline information regarding traffic and transportation can be found in USAG Fort Huachuca 1999 and USAG Fort Huachuca 2000a and is incorporated by reference. Site-specific details and relevant data not previously documented are provided.

Buffalo Soldier Trail, a four-lane road, runs along the western side of the EAC. The site is accessed via Kayetan Drive, a two-lane surface street owned and maintained by the city of Sierra

Vista. A paved driveway (approximately 0.15 miles long) connects the southwestern corner of the developed area of the EAC to Kayetan Drive. An additional dirt access road from Kayetan Drive leads to the southeastern corner of the developed area of the EAC and around the complex perimeter. Access to building 62715 on Fort Huachuca is from State Route 90 or Buffalo Soldier Trail through the roadway network inside Fort Huachuca. This network consists of primary and secondary collector streets, and local or residential streets.

3.6.3 POTENTIAL CONSEQUENCES

3.6.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Due to the remote location of proposed construction activities, and the lack of any significant traffic flow in or around the site, construction activities will not result in significant delays or major inconveniences to traffic along Kayetan Drive. There would be minor, short-term restrictions of traffic along State Route 90, Buffalo Soldier Trail, and Kayetan Drive when prefabricated modular building materials are transported to the site. These restrictions are anticipated to be short-term and less than significant and follow Arizona Department of Transportation (ADOT) requirements for over-sized loads along state highways. No significant impacts on regional highways or road networks due to construction activities associated with the proposed action are anticipated.

EAC personnel and student travel would increase daily traffic volumes along Kayetan Drive but this increase would be minor and not cause a disruption of service or safety hazard to motorists. HUMINT training-related travel in the region would occur on existing city, county, State and Fort Huachuca streets and would likewise not result in any disruption of service or safety hazard to motorists in the area. No significant impacts on regional highways or road networks due to POV travel or HUMINT training activities associated with the proposed action are anticipated.

3.6.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are similar to those described for the proposed action. Additional traffic would result from the transportation of students and instructors between building 62715 on the Main Post and the EAC. This travel would occur primarily along Cibeque and Hatfield Streets on Fort Huachuca and Buffalo Soldier Trail and Kayetan Drive off-post. Transportation of students and personnel would occur on U.S. Army or contracted bus services. This additional vehicular traffic would be negligible and would not impede ongoing military or civilian ground operations. No significant impact on traffic or transportation as a result of Alternative One is anticipated.

3.6.3.3 Alternative Two – The No Action Alternative

Under Alternative Two, no change in existing traffic or transportation patterns would occur. No impact on traffic or transportation is anticipated.

3.7 HAZARDOUS WASTE, SUBSTANCES, AND MATERIALS

3.7.1 CRITERIA FOR SIGNIFICANCE

Evaluation of the potential generation, use, or transport of hazardous materials and/or waste and its effect on public safety is based on both the potential for upset (accident) and the consequences of any project-related adverse event (negative effect associated with normal operations). Beneficial impacts may result from any direct or indirect safety improvements due to project implementation. A determination of significant impact related to hazardous waste and public safety could result if any of the following are anticipated to occur:

- Exposure of humans to unsafe levels of hazardous materials or hazardous waste.
- Generation of hazardous materials or hazardous waste in quantities or of a type that could not be accommodated by the current disposal system.
- Increase in likelihood of an uncontrolled release of hazardous materials that could contaminate soil, surface water, and groundwater.
- Create a situation involving endangerment or unusual risk to EAC personnel, visitors, nearby residents, and the general public off-site.

The ROI for hazardous materials is confined to the EAC and where construction activities would take place.

3.7.2 BASELINE ENVIRONMENT

Current baseline information regarding hazardous materials can be found in USAG Fort Huachuca 2002b and is incorporate by reference. Site-specific details and relevant data not previously documented are provided. The Fort Huachuca Installation Spill Contingency Plan, dated June 2000, was designed to provide the necessary procedures to achieve compliance with the foregoing regulations regarding the accumulation, storage, transportation, and disposal of hazardous wastes generated by various organizations on the fort. A copy of this plan is available for review at the office of the Fort Huachuca DIS Environmental and Natural Resources Division. Historic records dating back to the mid 1950's revealed no evidence of soil or groundwater contamination at the site. No petroleum storage tanks or chemical storage was discovered. Evidence of a POL storage shed was found for the northwest corner of the site but neither the shed nor any visual evidence of its existence remain.

3.7.3 POTENTIAL CONSEQUENCES

3.7.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Soil contamination may result from spills of petroleum, oils or lubricants (POL) during construction. To preclude any significant impact, POL would be stored, handled, and disposed of in accordance with generally acceptable industry standards. No significant impact resulting from construction-related soil contamination is anticipated

The minor increase in use of domestic cleaning products is anticipated to have no significant impact on the human or natural environment. No significant increase in the potential for a reportable spill is anticipated.

Little or no hazardous waste generation is anticipated from the proposed action. As a result, no significant increase in hazardous waste generation or in the potential for a reportable spill is anticipated from this alternative. Additionally, no changes to the Installation's Hazardous Waste Management Plan are required as a result of this action.

The installation operates one 90-day accumulation point and approximately 35 satellite accumulation points (SAP). A SAP would be established in the EAC if hazardous waste is generated there. Transportation of hazardous wastes from the EAC to an approved treatment, storage, and disposal facility (TSDF) would occur through contracts established by the Defense Reuse and Marketing Organization (DRMO) of the Defense Logistics Agency. DRMO ensures that transporters are qualified, maintain required permits and licenses, and manifest the packaged waste off the installation to a permitted TSDF. Overall, impacts relating to hazardous materials, substances or waste are anticipated to be less than significant.

3.7.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are identical to those described for the proposed action. No significant impact from hazardous waste, substances or materials is anticipated.

3.7.3.3 Alternative Two – The No Action Alternative

No change in the existing storage or handling of hazardous waste, substances, or materials on Fort Huachuca would occur. No significant impact from hazardous waste, substances or materials is anticipated.

3.8 SOCIOECONOMICS

3.8.1 CRITERIA FOR SIGNIFICANCE

A determination of significant impact on local or regional socioeconomic conditions could result if the alternative was found to induce substantial growth or decline in local or regional population either through provision of employment or permanent housing.

The ROI affected by the proposed action is the city of Sierra Vista including Fort Huachuca and secondarily, Cochise County.

3.8.2 BASELINE ENVIRONMENT

The proposed action could have an impact on the economy as well as the local infrastructure of both the city and the county. Baseline information regarding socioeconomic conditions at Fort Huachuca and in the region can be found in USAG Fort Huachuca 2002a and USAG Fort Huachuca 2000a and is hereby incorporated by reference. Site-specific details and relevant data not previously documented are provided.

The Fort Huachuca HUMINT training program currently employs 24 FTE personnel and trains approximately 18 FTE students per year.

3.8.3 POTENTIAL CONSEQUENCES

3.8.3.1 Proposed Action – Redevelopment of the Eastern Academic Complex with Discontinued Use of Buildings on Main Post

Construction costs are estimated at 10 million dollars over the life of the project which spans from 2003 through 2007. At least half of that amount will be spent outside of the Sierra Vista area on materials. The temporary construction will consist of prefab modular buildings, erected on site by the manufacturer's crews. The Fort's existing repair and maintenance contractor will do the site preparation. Therefore, little of the construction funding will enter the local economy as an increase over the existing salary base, other than for some materials available locally.

This addition of 36 FTE instructors and other personnel to the HUMINT training program, their associated families, and the additional training of 32 FTE students per year at the fort would represent a negligible increase in the local population. Additional permanent party instructor salaries are likely to be in the range of $50,000 per year. They could be expected to contribute to the local economy through purchase of goods, and possibly some services. Trainee personnel are anticipated to add little to the local economy. Their average pay is approximately $29,600 per month, before deductions. In addition to being at Fort Huachuca for only a few weeks, most of the trainees maintain households at their permanent duty stations and most of their pay is spent 'back home." Many of the trainees are restricted to the installation for most of their training period. They experience little free time and usually lack the transportation to shop off post. They may have weekend opportunities to attend movies or have dinner in a restaurant. Most are under the legal drinking age in Arizona, and do not contribute to alcohol sales off post.

The anticipated increase in direct local income (permanent party and TDY students) is approximately $2,750,000. Using data from the USACE Economic Impact Forecast System (EIFS), the gross economic impact to annual county sales volume resulting from the proposed action is expected to be less than one percent (0.7%); impact to total county income less than one-quarter of one percent (0.22%). This estimate of economic impact is significantly over-stated because of EIFS modeling limitations. The EIFS modeling process does not differentiate between the spending habits of TDY personnel and permanent party personnel. For example, salary income for TDY personnel is typically spent on rent and household expenditures back at their home station; not locally while they are on temporary assignment away from their home and family.

The EIFS model also projects an increase in induced regional employment of 20 FTEs. This induced employment estimate is often misinterpreted because of the way in which the EIFS model measures labor units. The EIFS model does not forecast the addition of 20 new jobs in the region; it only estimates an annual increase in the labor hour equivalent to 20 FTEs. This equivalent (41,600 hours) is most likely to be absorbed by an existing county workforce in the form of increased overtime, less idle time for existing workers, or new part-time jobs, rather than the creation of additional permanent, full-time jobs.

Given the small scale of the action relative to the size and complexity of the local economy, no significant socioeconomic impacts are anticipated. No appreciable change in local population distribution, employment, housing demand or expenditure patterns is anticipated as a result of this action. The effects of this change in workforce in the area will not be significant in a local or regional context. Construction-related funding for the proposed action is not anticipated to be significant in the context of local or regional construction spending. No significant socioeconomic impact to the city of Sierra Vista or surrounding communities is anticipated as a result of the proposed action.

3.8.3.2 Alternative One – Redevelopment of the Eastern Academic Complex with Continued Use of One Building on the Main Post

Potential impacts are identical to those described for the proposed action. No significant impact to socioeconomics and economic development is anticipated.

3.8.3.3 Alternative Two – The No Action Alternative

No change in socioeconomics and economic development would occur. No impact on socioeconomics and economic development is anticipated.

3.9 PERMITS AND REGULATORY AUTHORITY

The complete identification of permits and authorizations required for implementing, operating, and/or maintaining proposed EAC facilities can not be determined at this time because no final facility construction plan has been developed. All relevant permits and regulatory authorizations will be obtained prior to project implementation and made available to the general public as appropriate.

3.10 SUSTAINABILITY AND GREENING

Per Executive Order 12780, the proposed action will incorporate (to the extent feasible) all practical methods for sustainability and greening in daily operations. These methods include but are not limited to:

- On-site solid waste reduction and recycling programs
- Energy and water conservation programs
- Source reduction and pollution prevention programs

3.11 CUMULATIVE IMPACTS

Cumulative impacts are defined in the CEQ regulations (40 CFR 1500-1508) as those impacts attributable to the proposed action combined with other past, present, or reasonably foreseeable future impacts regardless of the source. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. However, in order to be considered a cumulative impact, the effects must:

- Occur in a common locale or region.
- Not be localized (i.e., they would contribute to effects of other actions).
- Impact a particular resource in a similar manner.

- Be long-term (short-term impacts would be temporary and would not typically contribute to significant cumulative impacts).

3.11.1 ANALYSIS OF CUMULATIVE IMPACTS

Analysis of cumulative impacts requires the evaluation of a broad range of information that may have a relationship to the proposed action and alternatives. A good understanding of the politics, sociology, economics, and environment of the region is key to this analysis, as is an accurate evaluation of factors that contribute to cumulative impacts. The most common regional and local environmental concerns voiced during previous public scoping activities in the Sierra Vista area have included:

- Trends relating to water resources (the San Pedro River, groundwater mining, water quality).
- Trends affecting biological resources (particularly federally-listed species and their habitats).
- Population growth and economic activity in the Fort Huachuca/Sierra Vista area and the resulting implications on water and ecological resources in the region.

All resource areas were examined for regional conditions and the potential for the proposed action and alternatives to contribute to regional trends or environmental conditions. The following sections address the only two resource areas where the impacts of the proposed action and implementation alternatives, in connection with related past, present, and reasonably foreseeable future actions warrant further consideration (water resources and socioeconomics and economic development). This consideration is given because of the elevated sensitivity regarding these resources within the region, not because the alternatives are anticipated to create any significant contribution to cumulative impacts on these resources. In fact, none of the alternatives analyzed in this EA would have any significant contribution to past, present, and reasonably foreseeable future actions in the local or regional context for any given resource.

Because the proposed action and Alternative One vary only by the continued use of building number 62715, their contribution to cumulative impacts is essentially the same. Thus this section will address these two potential actions together in the same paragraphs, and Alternative Two (the No-Action Alternative) separately.

3.11.2 WATER RESOURCES

The Sierra Vista Subwatershed is an extremely active area with respect to water resource management activities. Current trends regarding local and regional water resources can be found in USAG Fort Huachuca 2002a and are hereby incorporated by reference.

In general, Fort Huachuca has experienced an overall decline in installation water use. Fort Huachuca has adopted and implemented a conservation strategy that has already reduced use by 1300 acre-feet of water per year since 1989, and is anticipating to save, recharge, and/or reuse as much as another 3077 acre-feet per year by 2009. On-post conservation efforts include low water-use landscaping, retrofitting with low water-use fixtures, installation and use of waterless urinals, an aggressive leak-detection program, a restrictive landscape watering policy and

enforcement, and an educational awareness process. Other projects include effluent and urban runoff recharge, reuse of treated effluent for golf course and parade field watering, and retirement of agricultural pumping through purchase of conservation easements.

Regional population growth is anticipated to continue and regional water use is likely to increase as a result. Fort Huachuca's aggressive "no net increase in water use" policy as documented in USAIC&FH 2002 and recent contributions to regional water resource conservation and use reduction efforts through the Upper San Pedro Partnership demonstrate its regional leadership in addressing the complex water use issue within the San Pedro River Basin. This leadership has demonstrated positive direct, indirect and cumulative impacts on consumptive water use reduction at the fort as well as in the region and this trend is anticipated to continue. Therefore, while water consumption within the San Pedro River Basin and Sierra Vista Subwatershed is anticipated to increase with projected gains in local and regional population, Fort Huachuca's demonstrated contribution to water resource protection and conservation in the area constitutes an overall positive impact on cumulative effects to the regional water supply.

3.11.2.1 Proposed Action and Alternative One

As described in Section 3.2, the estimated 13.58 acre/feet/year of consumptive water use resulting from the proposed action would be offset through water conservation and reuse projects funded by Fort Huachuca as part of the proposed action. Therefore, the proposed action and alternative one are not anticipate to increase consumptive water use on Fort Huachuca or within the region. Additional benefits to groundwater conditions will result through a number of additional low water-use feature requirements at the proposed EAC facility and future on-site retention/detention of storm water. The contribution of the proposed action or alternative one to cumulative impacts on local or regional water resources is not anticipated to be significant.

3.11.2.2 Alternative Two - The No Action Alternative

Selection of the No Action Alternative would mean that existing levels of estimated water use associated with Fort Huachuca HUMINT training program activities would continue. The No-Action Alternative would not contribute to cumulative impacts on local or regional water resources.

3.11.3 SOCIOECONOMICS AND ECONOMIC IMPACT

Current baseline information regarding trends in socioeconomics and the regional economy can be found in USAG Fort Huachuca 2002a and USAG Fort Huachuca 2000a and are hereby incorporated by reference. In general, employment in the region has experienced a moderate increase relative to other small urban communities in Arizona.

Regional population growth is projected to increase, despite the relatively stable employment and population associated with Fort Huachuca. Attractions for people to move to the area include mild climate, international business opportunities, and reasonable real estate prices.

Demographic trends indicate that an increasing number of local residents are non-federal retirees relocating from outside the area. These individuals are attracted by good weather and a reasonable cost of living. They contribute accumulated wealth and steady incomes to an

economic base increasingly less dependent on Fort Huachuca. The No Action Alternative would have no contributions to local or regional cumulative trends or impacts on socioeconomics.

3.11.3.1 Proposed Action and Alternative One

The proposed action has the potential for a 36 FTE increase in HUMINT training program permanent party personnel and a 32 FTE increase in annual HUMINT student throughout. Other actions currently proposed for the area include a small increase at the Army Signal Command at Fort Huachuca and the proposed increase in student training at the Military Intelligence School, which are also not considered to be cumulatively significant in this analysis.

As previously stated, the anticipated increase in direct local income (permanent party and TDY students) is approximately $2,750,000. Using data from the USACE Economic Impact Forecast System (EIFS), the gross economic impact to annual county sales volume resulting from the proposed action is expected to be less than one percent (0.7%); impact to total county income less than one-quarter of one percent (0.22%). This estimate of economic impact is significantly over-stated because of EIFS modeling limitations. The EIFS modeling process does not differentiate between the spending habits of TDY personnel and permanent party personnel. For example, salary income for TDY personnel is typically spent on rent and household expenditures back at their home station; not locally while they are on temporary assignment away from their home and family.

Also as previously stated, the EIFS model projects an increase in induced regional employment of 20 FTEs. This induced employment estimate is often misinterpreted because of the way in which the EIFS model measures labor units. The EIFS model does not forecast the addition of 20 new jobs in the region; it only estimates an annual increase in the labor hour equivalent to 20 FTEs. This equivalent (41,600 hours) is most likely to be absorbed by an existing county workforce in the form of increased overtime, less idle time for existing workers, or new part-time jobs, rather than the creation of additional permanent, full-time jobs.

Given the small scale of the action relative to the size and complexity of the local economy, no significant socioeconomic impacts are anticipated. It is the conclusion of this analysis that implementation of the proposed action or alternative one is not anticipated to contribute significantly to regional growth or increases in the local population.

The proposed construction action would provide less than approximately $10 million during the construction period, probably through 2007; most of which will be in the form of payments for construction materials and employees. In the context of cumulative impacts, no significant impact to the local economy is anticipated from the minor increases in HUMINT personnel, student training or construction activities that may accompany this action.

3.11.3.2 Alternative Two – The No-Action Alternative

Employment authorizations at Fort Huachuca through FY 2002 indicate a relatively stable to slightly increasing employment base, when the fluctuations in students training at Fort Huachuca are taken into account. The other contributors to the local economy are other federal agencies; total federal contract, supply and services dollars; and growing opportunities in international business and ecologically-based tourism industry, all of which will likely continue at the same level or increase slightly.

3.11.4 SUMMARY

Implementation of the proposed action or alternative one is not anticipated to result in any significant contribution to past, present, and reasonably foreseeable future actions in the local or regional context for any given resource including water resources and socioeconomics and economic impacts. Likewise, implementation of the No-Action Alternative (Alternative Two) is not anticipated to result in any significant contribution to past, present, and reasonably foreseeable future actions.

3.12 ENVIRONMENTAL DESIGN CONSIDERATIONS

The HUMINT training program has committed to the incorporation of all feasible design considerations to reduce utility and natural resource consumption and lessen any impact that the proposed action could have on the human environment. In an effort to develop a more sustainable facility and demonstrate positive environmental stewardship, Fort Huachuca will incorporate environmental design considerations including but not limited to the following:

- Wastewater generated at the site will be recharged and/or reused. Recharge will occur at the Fort Huachuca East Range Effluent Recharge Basins. Wastewater will also be used for non-potable purposes such as landscaping where feasible.
- New facilities will be constructed with the following:
    - Waterless urinals in all of the men's restrooms.
    - Low water-use fixtures throughout the buildings.
    - Use of drought resistant native plant landscaping.
- Utilization of BMPs to reduce or eliminate impacts to water quality and air quality during construction.
- Should historic or cultural resources be unearthed during construction, all construction activities in the vicinity will cease until a determination can be made as to its/their significance and, if necessary a data recovery plan be implemented.

3.13 COMPARISON OF ANTICIPATED IMPACT

Table 3.6 summarizes anticipated impacts resulting from each of the three alternatives.

Table 3.6 Comparison of Anticipated Impacts

	Proposed Action	Alternative One	Alternative Two
Regional Setting and Land Use	no impact	no impact	no impact
Aesthetic and Visual Resources	not significant	not significant	no impact
Geology, Soils and Topography	not significant	not significant	no impact
Hydrology and Water Quality	not significant	not significant	no impact
Biological Resources	not significant	not significant	no impact
Floodplains	no impact	no impact	no impact
Air Quality	not significant	not significant	no impact
Noise	not significant	not significant	no impact
Historic and Cultural Resources	no impact	no impact	no impact
Infrastructure Available	not significant	not significant	no impact
Traffic and Transportation	not significant	not significant	no impact
Hazardous Waste, Substances and Materials	not significant	not significant	no impact
Socioeconomics and Economic Development	not significant	not significant	no impact
Environmental Justice and Protection of Children	no impact	no impact	no impact
Transboundary Impacts	no impact	no impact	no impact
Health and Human Safety	no impact	no impact	no impact
Cumulative Impacts	not significant	not significant	no impact

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ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
BMP	Best Management Practices
CEQ	Council on Environmental Quality
dBA	A-weighted Decibels
dB	Decibels
DIS	Directorate of Installation Support
DRMO	Defense Reuse and Marketing Organization
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EAC	East Range Academic Complex
FONSI	Finding of No Significant Impact
FTE	Full Time Equivalent
HUMINT	Human Intelligence
HWMP	Hazardous Waste Management Plan
L_{dn}	Day-night Decibel Measurement
L_{eq}	Equivalent Noise Value
L_{max}	Maximum Noise Reading
NCA	National Conservation Area
NEPA	National Environmental Policy Act
NOA	Notification of Availability
NOI	Notification of Intent
POL	Petroleum, oil, and lubricants
POV	Personally Owned Vehicles
ROG	Reactive Organic Gases
ROI	Region of Influence
RONA	Record of Non Applicability
ROW	Right-of-Way
SIP	State Implementation Plan
SWPPP	Storm Water Pollution Prevention Plan
TDY	Temporary Duty
TSDF	Treatment, storage, and disposal facility
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USPB	Upper San Pedro Basin
WWTP	Waste Water Treatment Plant

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APPENDIX A

CONSUMPTIVE WATER USE ANALYSIS FOR EXPANSION OF DOD HUMINT TRAINING PROGRAM AT FORT HUACHUCA, ARIZONA

Table 1 - Permanent Party Personnel Water & Wastewater Impact

Additional Direct Employment (FTE)	Additional Family Members	Avg Daily Water Use (Gal)	Annual Water Use (Ac-Ft)	On-Post Wastewater Generated (Ac-Ft/Yr)	On-Post Wastewater Recharged (Ac-Ft/Yr)	Annual Operations Water Use (Gal)	Net Concumptive Water Use (Ac-Ft/Yr)
36	55.8	13770	15.424381	4.068092	3.661283	5000	11.778442

Assumptions:
Average Household Size is 2.65
25% of permanent party personnel would reside on Fort Huachuca
Avg Daily On-Post Wastewater Generation = 92 gal/person/day for on-post residents (150 * 0.61)
Avg Daily On-Post Wastewater Generation = 31 gal/person/day for off-post residents (150 * 0.34 [water use on-post] * 0.61 [wastewater generated on-post])
Recharge = 90% of Wastewater Generation (on-post) with 10% for losses due to evaporation/transpiration
On-post wastewater recharge for on-post residents calculated for 365 days/year
On-post wastewater recharge for off-post residents calculated for 260 days/year

Table 2 - TDY Personnel Water Use

Number of Students (FTE)	Avg Daily Water Use (Gal)	Annual Water Use (Ac-Ft)	Avg Daily Wastewater Generation (Gal)	On-Post Wastewater Generated (Ac-Ft/Yr)	On-Post Wastewater Recharged (Ac-Ft/Yr)	Net Consumptive Water Use (Ac-Ft/Yr)
32	2400	2.688345	1232	0.983026	0.884723	1.803622

Assumptions:
Avg Daily Water Use for TDY personnel = 75 gal/person/day (assumes reduced domestic use)
Avg Daily On-Post Wastewater Generation for on-post TDY Personnel = 46 gal/person/day (75 * 0.61)
Avg Daily On-Post Wastewater Generation for off-post TDY Personnel = 16 gal/person/day (75 * 0.34 * 0.61)
On-Post Recharge = 90% of Wastewater Generation with 10% for losses due to evaporation/transpiration
On-Post wastewater recharge is calculated based on 75% of TDY personnel residing on Fort Huachuca
On-Post wastewater recharge is calculated based 260 training days/year on Fort Huachuca

Table 3 - Combined Net Annual Water Usage

Permanent Party and EAC Net Consumptive Water Use (Ac-Ft/Yr)	TDY Personnel Net Concumptive Water Use (Ac-Ft/Yr)	Combined Net Consumptive Water Use (Ac-Ft/Yr)
11.778442	1.803622	13.582064

APPENDIX B

AIR QUALITY IMPACT ANALYSIS FOR THE EXPANSION OF DOD HUMINT TRAINING PROGRAM AT FORT HUACHUCA, ARIZONA

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This analysis considers both construction and operational impacts to local and regional air quality that could result from implementation of the proposed action.

Construction

Construction operations would create a minor source of temporary dust emissions affecting local air quality. The quantity of dust emissions from proposed construction operations is estimated using the procedure (E = 1.2 tons/acre/month of activity) as presented in *EPA Guidance Document AP-42 (Ch. 13.2.3.3)*. For analysis purposes, it is estimated that the proposed construction activity would disturb a maximum of 5 acres per year for a period of one month per year. Based on this level of activity, the contribution of temporary dust emissions to the local ambient air is approximately 6.0 tons per year. However, with the use of dust control measures (wet suppression) during construction, the contribution would be significantly reduced.

In addition to dust emissions, emissions of other criteria pollutants from construction equipment and were also estimated (Table 1).

Table 1 Estimated Annual Emissions from Construction Activities

Equipment Type (number)	Anticipated Annual Use	CO	ROG	NOx	SOx	PM10
5-ton dump truck (2)	200 miles	22.88 lbs.	7.04 lbs.	78.56 lbs.	7.36 lbs.	6.56 lbs.
D-7 bulldozer (1)	120 hours	81 lbs.	18 lbs.	204 lbs.	42 lbs.	16.80 lbs.
Front-end loader (1)	120 hours	81 lbs.	18 lbs.	204 lbs.	42 lbs.	16.80 lbs.
Grader (1)	120 hours	81 lbs.	18 lbs.	204 lbs.	42 lbs.	16.80 lbs.
40-ton crane (1)	120 hours	209.52 lbs.	69.84 lbs.	535.44 lbs.	46.56 lbs.	34.92 lbs.
Construction Worker POV (10)	200 miles	0.27 lbs.	0.07 lbs.	0.23 lbs.	0.0 lbs.	0.07 lbs.
TOTAL (lbs)		475.67	130.95	1226.23	179.92	91.95
TOTAL (tons)		0.24	0.07	0.61	0.09	0.05

Factor source: Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources

Operation

Emissions from annual EAC operation would result from three sources: 1) EAC instructor and permanent party personnel vehicle use, 2) student personal vehicle use, and 3) HUMINT training program vehicle use. Potential impacts from these three sources are estimated in Table 2.

Table 2 Estimated Annual Emissions from Daily Commutes and Training

Equipment Type (number)	Anticipated Annual Use	CO	ROG	NOx	SOx	PM10
EAC Personnel POV (60)	7,300 miles [1]	58.32 lbs.	15.84 lbs.	49.44 lbs.	0.0 lbs.	15.06 lbs.
Student POV (300)	175 miles [2]	6.99 lbs.	1.90 lbs.	5.93 lbs.	0.0 lbs.	1.81 lbs.
EAC Vehicles (10)	10,000 miles [3]	2400 lbs.	720 lbs.	8240 lbs.	760 lbs.	680 lbs.
TOTAL (lbs)		**2465.31**	**737.74**	**8295.37**	**760**	**832.41**
TOTAL (tons) [4]		**1.23**	**0.37**	**4.15**	**0.38**	**0.42**

[1] Assumes 4-door passenger car, 365 days of travel per year, 20 miles of travel per day
[2] Assumes 4-door passenger car, 35 days of travel per year, 5 miles of travel per day
[3] Assumes 4-door passenger car, 100 days of travel per year, 100 miles of travel per day
[4] Based on EMFAC7G Model

Conclusion

The area is within an attainment area for all criteria pollutants, and the total emission from these activities would clearly not exceed 50 ton/year pollutant-specific *de minimis* threshold values for all criteria pollutants and would be less than 10% of the total regional emissions budget for the air basin. Further procedural requirements under the General Conformity Rule are therefore not applicable and the proposed action is anticipated to have a less than significant impact on local or regional air quality.